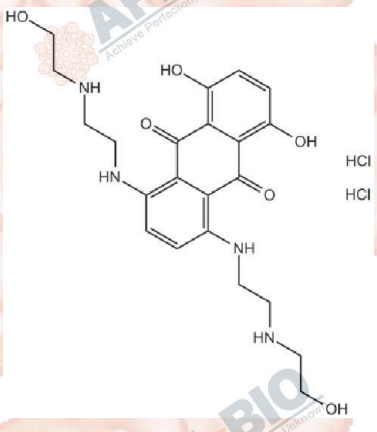
Product Data Sheet

Mitoxantrone HCl

Cat. No.: B2114
CAS No.: 70476-82-3
Formula: C22H29ClN4O6·HCl
M.Wt: 517.4
Synonyms:
Target:
Pathway:
Storage: Store at -20°C



Solvent & Solubility

In Vitro

insoluble in EtOH; ≥51.53 mg/mL in DMSO; ≥2.97 mg/mL in H2O with ultrasonic

Preparing Stock Solutions

Concentration \ Mass / Solvent	1mg	5mg	10mg
1 mM	1.9327 mL	9.6637 mL	19.3274 mL
5 mM	0.3865 mL	1.9327 mL	3.8655 mL
10 mM	0.1933 mL	0.9664 mL	1.9327 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary	Topoisomerase II inhibitor, anti-neoplastic drug
IC_{50} & Target	

In Vitro

Cell Viability Assay

Cell Line:	DPSCs and HDFs
Preparation method:	The solubility of this compound in DMSO is > 18.2 mg/mL. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below - 20 °C for several months.
Reacting conditions:	5, 20, 50, 100 and 150 nM

	Applications:	Mitoxantrone HCl almost completely inhibited DPSCs and HDFs proliferation without causing significant decrease in cell viability after 6 days. Mitoxantrone HCl, at higher doses, i.e. 100 nM and 150 nM, significantly decreased DPSCs and HDFs viability after 3 days. In addition, Mitoxantrone HCl at doses over 50 nM significantly increased the activity of caspases 3/7 and the level of puma, inducing DPSCs and HDFs apoptosis.
In Vivo	**Animal experiment**	
	Animal models:	Mice bearing PAC120 and HID xenografts
	Dosage form:	1 mg/kg; i.p.; once per 3 weeks
	Applications:	In mice bearing PAC120 xenografts, Mitoxantrone HCl was well tolerated, although it caused a weight loss of 10% or less. However, it did not inhibit tumor growth. In mice bearing HID xenografts, Mitoxantrone HCl transiently inhibited tumor growth with the optimal effect 3 weeks after the start of treatment. After 30 days, Mitoxantrone HCl no longer exhibited any inhibitory effect on tumor growth.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

See more customer validations on www.apexbt.com.

References

[1]. Seifrtova M, Havelek R, Soukup T, Filipova A, Mokry J, Rezacova M. Mitoxantrone ability to induce premature senescence in human dental pulp stem cells and human dermal fibroblasts. J Physiol Pharmacol. 2013 Apr;64(2):255-66.

[2]. Oudard S, Legrier ME, Boyé K, Bras-Gonalves R, De Pinieux G, De Cremoux P, Poupon MF. Activity of docetaxel with or without estramustine phosphate versus mitoxantrone in androgen dependent and independent human prostate cancer xenografts. J Urol. 2003 May;169(5):1729-34.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for

long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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